REMARKS

Claims 1-9, 16-22, 28-36, and 46-53 are pending. The Office Action of September 7, 2001, has been carefully considered. Applicants appreciate the Examiner's indication that Claims 1-9 and 16-22 are allowable over the prior art. New Claims 50-53 have been added to further define aspects of the invention which Applicants believe are patentable. Applicants request that the Examiner consider the above amendments and the following remarks, and pass the application to allowance.

RESPONSE TO OFFICE ACTION:

Response to Election/Restriction:

The Examiner required restriction to one of the following under 35 U.S.C. §121;

Group I: Claims 1-9, 16-22, 28-36, and 46-49; and

Group II: Claims 10-15, 23-27, 37-41, and 42-45.

Pursuant to the telephonic interview conducted on July 2, 2001, between Examiner Eric Compton, and Applicants' representative T. Gene Dillahunty, Applicants' representative provisionally elected Claims 1-9, 16-22, 28-36, and 46-49. Applicants affirm the election of Claims 1-9, 16-22, 28-36, and 46-49 with traverse. The restriction is traversed on the grounds that the method of producing multilayer metal foil parts and a multilayer metal foil product are merely various aspects of a single invention, all of which should be granted and issued in a single patent.

Rejections Under 35 U.S.C. §103:

Claims 28, 29, and 32-35 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,800,905 to Sheridan et al. in view of U.S. Patent No. 2,411,075 to Wyrick.

Claim 28 as amended recites a method of producing a multilayer metal foil product. The method includes combining a plurality of continuous metal foil layers to form an advancing continuous stack of metal foil layers; scoring or creasing the advancing stack of continuous metal foil layers across at least a portion of the width of the stack at predetermined intervals wherein the score or crease alternates in a left and a right direction; causing the continuous stack of metal foil layers to fold in alternating directions at said scores or creases; and piling the alternately folding stack in a zigzag fashion to form a z-fold pack of the continuous stack of metal foil layers.

Sheridan et al. relates to a pad including thermal insulation and heat sink areas. The pad includes a plurality of layers of metal foil from a stack with the layers arranged one above the other.

Wyrick relates to a machine for aligning and folding continuous webs of material into a fan-folded pack. The invention is particularly adapted for use in autographic registers and superimposed continuous sheets which are used in printing machines and other similar recording apparatuses. The device includes a plurality of paper web supply rolls wherein the paper webs are drawn off from the supply rolls and over individual guide rolls, then in super-imposed engagement through a knurled gripper or a feed roll. The superimposed webs are then drawn through an intermittent slack-producing means which operates in synchronism with the web hinge aligning and creasing mechanism to guide the webs downward and fan-folded upon the counterbalanced platform or table member.

Wyrick, however, does not teach or suggest scoring or creasing the advancing stack in alternating left and right directions. Rather, Wyrick describes an "intermittent stack-producing means 17 which operates in synchronism with the web hinge aligning and creasing mechanism," to guide the webs "downward and fan-folded upon the

counterbalanced platform or table member 19." col. 3, lines 64-69. Thus, the creasing mechanism does not score or crease the advancing stack in alternating directions.

Accordingly, since Sheridan et al. in view of Wyrick does not teach or suggest scoring or creasing the advancing sheet in alternating left and right directions, Claim 28 should be allowed.

Claim 29 recites in independent form, the method of Claim 28, wherein the step of combining the continuous metal foil layers comprises combining a plurality of continuous flat metal foil layers to form a stack and imparting a pattern to all layers of the stack to form a stack of patterned and nested metal foil layers.

As set forth above, Wyrick does not teach or suggest imparting a pattern to all layers of the stack to form a stack of patterned and nested metal foil layers. Rather, the web hinge aligning and creasing mechanism aligns and creases the web of material for guiding "downward and fan-folded upon the counter-balanced platform or table member 19." col. 3, lines 67-69. The web hinge aligning and creasing mechanism, however, does not impart a pattern to the web of material. Accordingly, Claim 29 should be allowable. Claims 32-35 are dependent on Claim 29 and should also be allowed.

Claims 30-31 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sheridan et al./Wyrick as applied to Claim 28 above, and further in view of Applicant's Admitted Prior Art (AAPA).

Claims 30, 31 and 36 recite a method according to Claim 28 wherein the step of combining the continuous metal foil layers comprises combining a plurality of previously patterned metal foil layers (Claim 30), combining at least one patterned metal foil layer and at least one flat metal foil layer (Claim 31), or combining a fiber layer between two of the metal foil layers (Claim 36).

As set forth above, Sheridan et al./Wyrick does not teach or suggest scoring or creasing the advancing stack of continuous metal foil layers in alternating left and right directions. Accordingly, Claims 30-31 and 36 are not taught nor suggested by Sheridan et al./Wyrick and further in view of the prior art. Thus, Claims 30-31 and 36 should be allowable.

Claims 46-49 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,800,905 to Sheridan et al. in view of U.S. Patent No. 1,489,833 to Keller.

Claim 46 recites a method of producing multilayer metal foil parts. The method includes feeding to a parts forming operation a continuous multilayer stack of metal foil layers from a z-fold pack of a continuous multilayer stack of metal foil layers; and forming and cutting individual multilayer metal foil parts from said stack of metal foil layers.

As set forth above, Sheridan relates to a pad including thermal insulation and heat sink areas. The pad includes a plurality of layers of metal foil from a stack with the layers arranged one above the other. Sheridan, however, does not teach or suggest forming a z-folded pack of the continuous stack of metal foil layers.

Keller relates to a method of production of books, pamphlets, magazines, periodicals, newspapers, folders and the like. In Keller, a continuous web of unprinted paper is processed whereby one side is printed, and then the opposite side is printed. The printed web is then fed into a truck in a zig zag fold. The trucks of printed material are then fed into an apparatus wherein "successive creases or folds H all come into register with each other"[1] to form a magazine, etc. The trucks of printed material are single sheets rather than the multilayer stack as recited in Claim 46.

The combination of Sheridan and Keller, however, does not teach or suggest the method of Claim 46, since Keller describes multiple trucks of printed material which are

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[1] Page 3, lines 8-10.

fed into the apparatus, rather than a single truck of a continuous multilayer sheet as recited in Claim 46. Accordingly, since Sheridan in view of Keller does not teach or suggest feeding a continuous multilayer stack of metal foil layers from a z-fold pack to a parts forming operation, Claim 46 should be allowable. Claims 47-49 are dependent on Claim 46 and should also be allowable.

New Claims 50-53:

Claims 50-53 have been added to further define aspects of the invention which Applicants believe are patentable.

Claims 50-51 are dependent from Claim 28 and recite a method wherein the scoring or creasing members are rotating members having respective male and female positions, and the rotating members are periodically activated and rotated one revolution at predetermined intervals to produce an alternating score or crease across the substantial width of the multilayer stack, respectively.

As set forth above, since none of the art cited by the Examiner teaches or suggests the method of producing a multilayer metal foil product as recited in Claim 28, Claims 50-51 should be allowable.

Claims 52 and 53 recite a method according to Claim 46 wherein a draw of the continuous multilayer metal foil from the z-fold stack is horizontal or non-vertical. As set forth above, since none of the art cited by the Examiner teaches or suggests the method of producing multilayer metal foil part as recited in Claim 46 nor drawing the continuous multilayer metal foil from the z-fold stack in any other manner other than vertical, Claims 52 and 53 should be allowable.

CONCLUSION

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Reconsideration and allowance of the above-identified application are respectfully requested. In the event that there are any questions concerning this Amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution may be expedited.

Respectfully submitted,

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VERSION WITH MAKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

28. (Amended) A method of producing a multilayer metal foil product comprising:

combining a plurality of continuous metal foil layers to form an advancing continuous stack of metal foil layers;

scoring or creasing the advancing stack of continuous metal foil layers across at least a portion of the width of the stack at predetermined intervals wherein the score or crease alternates in a left and a right direction;

causing the continuous stack of metal foil layers to fold in alternating directions at said scores or creases; and

piling the alternately folding stack in a zigzag fashion to form a z-fold pack of the continuous stack of metal foil layers.

29. (Amended) A method [according to claim 28] of producing a multilayer metal foil product comprising: [wherein the step of combining the continuous metal foil layers comprises]

combining a plurality of continuous flat metal foil layers to form a stack and imparting a pattern to all layers of the stack to form a stack of patterned and nested metal foil layers;

scoring or creasing the advancing stack of continuous metal foil layers across at least a portion of the width of the stack at predetermined intervals;

causing the continuous stack of metal foil layers to fold in alternating directions at said scores or creases; and

piling the alternately folding stack in a zigzag fashion to form a z-fold pack of the continuous stack of metal foil layers.

34. (Amended) A method according to claim [28] 29 wherein the pattern imparted to the stack of metal foil layers is embossments or corrugations.